

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application of : Box: REISSUE
Bernard Bellcau et al. : Group Art Unit:
Serial No.: 09/585,431 : Examiner: Jerome D. Golberg
Prior Patent No.: 5,532,246
Filed: Herewith :

For: **USE OF 1,3-OXATHIOLANE NUCLEOSIDE ANALOGUES IN THE
TREATMENT OF HEPATITIS B**

**POWER OF ATTORNEY, OATH AND
REISSUE DECLARATION UNDER 37 C.F.R. §1.175 and § 1.63**

Assistant Commissioner for Patents
Washington, D.C. 20231

SIR:

The undersigned inventors of the subject matter of the claims of U.S. Patent No. 5,532,246 and of the subject matter of the claims as proposed herein for reissue, being duly warned, declare as follows:

We are the inventors of the subject matter of the claims of U.S. Patent No. 5,532,246 and of the subject matter of the claims as proposed herein for reissue, and believe our original patent U.S. Patent No. 5,532,246 to be partly inoperative by reason of claiming less than we had a right to claim in the patent. Specifically, there is an error in that the patent does not contain claims of intermediate scope. We submit herewith an application for reissue, amended accordingly.

All errors sought for correction by this reissue application up to the filing of this reissue oath arose without any deceptive intention on our part.

We have reviewed and understand the contents of the specification, including the claims, as amended in the attached reissue application.

We believe we are the original and first inventors of the subject matter which is claimed and for which a patent is sought.

We acknowledge the duty to disclose all information which is known to us and which is material to patentability as defined by 37 C.F.R. §1.56.

Best Available Copy

We hereby appoint as our attorneys with power of substitution and revocation to transact all business in the Patent and Trademark Office connected therewith:

I. William Millen (19,544); John L. White (17,746); Anthony J. Zelano (27,969); Alan E.J. Branigan (20,565); John R. Moses (24,983); Harry B. Shubin (32,004); Brion P. Heaney (32,542); Richard J. Traverso (30,595); John A. Sopp (33,103); Richard M. Lebovitz (37,067); John H. Thomas (33,460); Cathcrine M. Joyce (40,668); James T. Moore (35,619); James E. Ruland (37,432); Nancy Axelrod (44,014) and Jennifer J. Branigan (40,921)

whose postal address is:

MILLEN, WHITE, ZELANO & BRANIGAN, P.C.
Arlington Courthouse Plaza I
2200 Clarendon Blvd., Suite 1400
Arlington, Virginia 22201
Phone: (703) 243-6333
Fax: (703) 243-6410

We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

July 18, 2000
Date

Pierrette Belleau
Bernard BELLEAU (deceased).
by Pierrette Belleau, his executrix

July 12, 2000
Date

Nghe NGUYEN-BA
Nghe NGUYEN-BA

K:\PATUA\FG\12\Re\246 Reissue Dec.wpd

COMBINED DECLARATION FOR PATENT APPLICATION AND POWER OF ATTORNEY
(Includes Reference to PCT International Applications)ATTORNEY'S DECLARATION
IAFG 12 RE

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought of the invention entitled:

USE OF 1,3-OXATHIOLANE NUCLEOSIDE ANALOGUES IN THE TREATMENT OF HEPATITIS B

the specification of which (check only one item below):

☐ is attached hereto.☒ was filed as United States applicationSerial No. 09/585,431on June 2, 2000

and was amended

on _____ (if applicable).

☒ was filed as PCT international applicationNumber PCT/CA92/00001on January 3, 1992

and was amended under PCT Article 19

on _____ (if applicable).

I hereby state that I have reviewed and understood the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a).

I hereby claim priority benefits under Title 35, United States Code, §119 of the following United States Provisional Application and of any foreign application(s) for patent or inventor's certificate or of any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed:

PRIOR U.S. PROVISIONAL AND FOREIGN/PCT APPLICATION(S) AND ANY PRIORITY CLAIMS UNDER 35 U.S.C. 119:

COUNTRY (if PCT indicate "PCT")	APPLICATION NUMBER	DATE OF FILING (day, month, year)	PRIORITY CLAIMED UNDER 35 USC 119
Great Britain	9100039.8	03 January 1991	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Great Britain	9109913	07 May 1991	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
			<input type="checkbox"/> YES <input type="checkbox"/> NO
			<input type="checkbox"/> YES <input type="checkbox"/> NO
			<input type="checkbox"/> YES <input type="checkbox"/> NO

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Combined Declaration For Patent Application and Power of Attorney (Continued)

(Excludes Reference to PCT International Application)

ATTORNEY'S DOCKET NUMBER
IAFG 12 RE

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) or PCT international application(s) designating the United States of America that are listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in that/those prior application(s) in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application(s) and the national or PCT international filing date of this application.

U.S. APPLICATION NUMBER	U.S. FILING DATE	PATENTED	PENDING	ABANDONED
PCT APPLICATION NO	PCT FILING DATE	U.S. SERIAL NUMBERS ASSIGNED (if any)		
PCT/CA92/00001	January 3, 1992	84,222	X	

POWER OF ATTORNEY: As a named inventor, I hereby appoint: William Millen (19,544); John L. White (17,746); Anthony J. Zelano (27,969); Alan E.J. Branigan (20,565); John R. Moses (24,983); Harry B. Shubin (32,004); Brian P. Hecney (32,542); Richard J. Traverso (30,595); John A. Sopp (33,103); Richard M. Lebovitz (37,067); John H. Thomas (33,460); Catherine M. Joyce (40,668); James T. Moore (35,619); James E. Ruland (37,432); Nancy Axelrod (44,014) and Jennifer J. Branigan (40,921) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

Send Correspondence to: **MILLEN, WHITE, ZELANO & BRANIGAN, P.C.**
Arlington Courthouse Plaza I, Suite 1400
2200 Clarendon Boulevard
Arlington, Virginia 22201

Telephone No
703/243-6333

Direct Telephone Calls to:

201	FULL NAME OF INVENTOR	FAMILY NAME BELLEAU (deceased), Pierrette Belleau, Executrix of Estate	FIRST GIVEN NAME Bernard	SECOND GIVEN NAME
	RESIDENCE & CITIZENSHIP	CITY Montreal	STATE OR FOREIGN COUNTRY Canada	COUNTRY OF CITIZENSHIP Canada
	POST OFFICE ADDRESS	STREET 6301 Place Northcrest, apt. 6L	CITY Montreal	STATE & ZIP CODE/COUNTRY Quebec, Canada H3S 2W4
202	FULL NAME OF INVENTOR	FAMILY NAME NGUYEN-BA	FIRST GIVEN NAME Paul	SECOND GIVEN NAME
	RESIDENCE & CITIZENSHIP	CITY La Prairie	STATE OR FOREIGN COUNTRY Canada	COUNTRY OF CITIZENSHIP Canada
	POST OFFICE ADDRESS	STREET 175 Place Leotable Dubuc	CITY La Prairie	STATE & ZIP CODE/COUNTRY Quebec, Canada J5R 5M5
203	FULL NAME OF INVENTOR	FAMILY NAME	FIRST GIVEN NAME	SECOND GIVEN NAME
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP
	POST OFFICE ADDRESS	STREET	CITY	STATE & ZIP CODE/COUNTRY
204	FULL NAME OF INVENTOR	FAMILY NAME	FIRST GIVEN NAME	SECOND GIVEN NAME
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP
	POST OFFICE ADDRESS	STREET	CITY	STATE & ZIP CODE/COUNTRY

Combined Declaration for Patent Application and Power of Attorney (Continued)
(Include Reference to PCT International Applications)

 ATTORNEY'S DOCKET NUMBER
 IAFG 12 RE

205	FULL NAME OF INVENTOR	FAMILY NAME	FIRST GIVEN NAME	SECOND GIVEN NAME
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP
	POST OFFICE ADDRESS	STREET	CITY	STATE & ZIP CODE/COUNTRY
206	FULL NAME OF INVENTOR	FAMILY NAME	FIRST GIVEN NAME	SECOND GIVEN NAME
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP
	POST OFFICE ADDRESS	STREET	CITY	STATE & ZIP CODE/COUNTRY
207	FULL NAME OF INVENTOR	FAMILY NAME	FIRST GIVEN NAME	SECOND GIVEN NAME
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP
	POST OFFICE ADDRESS	STREET	CITY	STATE & ZIP CODE/COUNTRY
208	FULL NAME OF INVENTOR	FAMILY NAME	FIRST GIVEN NAME	SECOND GIVEN NAME
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP
	POST OFFICE ADDRESS	STREET	CITY	STATE & ZIP CODE/COUNTRY
209	FULL NAME OF INVENTOR	FAMILY NAME	FIRST GIVEN NAME	SECOND GIVEN NAME
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP
	POST OFFICE ADDRESS	STREET	CITY	STATE & ZIP CODE/COUNTRY

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

SIGNATURE OF INVENTOR 201	DATE	SIGNATURE OF INVENTOR 207	DATE
<i>Frederic Belknap</i>	<i>Aug 7, 2000</i>		
SIGNATURE OF INVENTOR 202	DATE	SIGNATURE OF INVENTOR 208	DATE
<i>[Signature]</i>	<i>Aug 7, 2000</i>		
SIGNATURE OF INVENTOR 203	DATE	SIGNATURE OF INVENTOR 209	DATE
SIGNATURE OF INVENTOR 204	DATE	SIGNATURE OF INVENTOR 210	DATE
SIGNATURE OF INVENTOR 205	DATE	SIGNATURE OF INVENTOR 211	DATE
SIGNATURE OF INVENTOR 206	DATE	SIGNATURE OF INVENTOR 212	DATE



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

DATE: 11/10/94
TO:

N06A

FISH & NEAVE
GERALD J. FLATTMANN, JR.
1251 AVENUE OF THE AMERICAS
NEW YORK, NY 10020

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UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT BRANCH OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE U.S. PATENT AND TRADEMARK OFFICE ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT ASSIGNMENT PROCESSING SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT BRANCH, NORTH TOWER BUILDING, SUITE 10C35, WASHINGTON, D.C. 20231

ASSIGNOR:
BELLEAU, BERNARD

DOC DATE: 06/23/93

ASSIGNOR:
NGUYEN-BA, NGHE

DOC DATE: 06/23/93

RECORDATION DATE: 07/06/94 NUMBER OF PAGES 008 REEL/FRAME 7175/0001

DIGEST : ASSIGNMENT OF ASSIGNORS INTEREST

ASSIGNEE:
BIOCHEM PHARMA, INC.
275 ARMAND FRAPPIER BLVD.
LAVAL CANADA, QUEBEC H7V 4A7

SERIAL NUMBER 8-084222 FILING DATE 08/09/93
PATENT NUMBER ISSUE DATE 00/00/00

B. Coyle
EXAMINER/PARALEGAL
ASSIGNMENT BRANCH
ASSIGNMENT/CERTIFICATION SERVICES DIVISION

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NOV 14 1994

FISH & NEAVE - PATENT DEPT.
REFERRED TO
NOTED BY *[Signature]*

SENT BY:

12/20/94

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USPTO ACSD

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U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office

Form PTO-1590

(Rev. 9-93)

CLASS No. 0251-0011 (Rev. 4-90)

Tab settings 0 0 0 0

RECORDATION FORM COVER SHEET
PATENTS ONLY

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original document or copy thereof.

1 Name of conveying party(ies)

Bernard Belleau

Nghe Nguyen-Ba

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

2 Nature of conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ Other

Execution Date: June 23, 1993

2 Name and address of receiving party(ies)

Name: BioChem Pharma, Inc.

Internal Address:

Street Address: 275 Armand Frappier Blvd.

City: Laval State: Quebec ZIP: H7Y 4A7
CanadaAdditional name(s) & address(es) attached? ☐ Yes ☒ No

4 Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No.(s)

PCT/CA 92/00001

(U.S. Application Serial No.
08/084,222)

B. Patent No.(s)

Additional numbers checked? ☐ Yes ☒ No6 Name and address of party to whom correspondence
concerning document should be mailed:

Name: Gerald J. Flattmann, Jr., Esq.

Internal Address:

Street Address: Fish & Neave

1251 Avenue of the Americas

City: New York State: NY ZIP: 10020

6. Total number of applications and patents involved:

1

7. Total fee (37 CFR 3.61) Previously Paid

☐ Enclosed☒ Authorized to be charged to deposit account

8. Deposit account number:

06 1075

(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Gerald J. Flattmann, Jr.

Name of Person Signing

Signature

Total number of pages including cover sheet, attachments, and documents:

8

Date

Mail documents to be recorded with required cover sheet information to:
Commissioner of Patents & Trademarks, Box Assignments
Washington, DC 20590

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R117175 IRAN001

PCT
ASSIGNMENT

IAF-12 PCT

I/We,

- (1) Bernard Bellean (deceased), and
- (2) Nghe Nguyen-Ba

residing, respectively, at

- (1) 431 Victoria Avenue, Westmount, Quebec
H3V 2R3, Canada, and
- (2) 175 Place Lestable Dubuc, La Prairie, Quebec
J5R 5M5, Canada

for good and valuable consideration, receipt of which is hereby acknowledged, have assigned, sold and transferred to, and do hereby assign, sell and transfer to BIOCHEM PHARMA INC. a corporation organized and existing under the laws of the Canada and having an office and a place of business at 2250 Daniel Johnson Boulevard, Suite 600, Laval, Quebec H7T 2L1, Canada, its successors and assigns: (1) the entire right, title and interest in all countries throughout the world in and to any and all my/our inventions and discoveries disclosed in my/our International Patent Application entitled: USE OF 1,3-OXATHIOLANE NUCLEOSIDE ANALOGUES IN THE TREATMENT OF HEPATITIS B. filed under the Patent Cooperation Treaty in the Canadian Receiving Office (RO/CA) on 3 January 1992, under Serial No. PCT/CA92/00001, and designating AT, AU, BB, BG, BR, CA, CH, CS, DE, DK, EPO, ES, FI, GB, HU, JP, KP, LR, LK, LU MG, MN, MW, NL, NO, OAPI, PL, RO, SD, SE, US, including any renewals, revivals, reissues, reexaminations, extensions, continuations and divisions thereof, and any substitute applications therefor; (2) the full and complete right to file patent applications in the name of BIOCHEM PHARMA INC., its designee, or in my/our names at BIOCHEM PHARMA INC., or its designee's election,

page 1 of 4

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on the aforesaid inventions, discoveries and applications in all countries of the world; (3) the entire right, title and interest in and to any Letters Patent which may issue on the aforesaid inventions, discoveries and applications in any country of the world and any renewals, revivals, reissues, reexaminations and extensions thereof, and any patents of confirmation, registration and importation of the same; and (4) the entire right, title and interest in and to all Convention and Treaty Rights of all kinds thereon, including without limitation all rights of priority in any country of the world, in and to the following priority application(s):

<u>9100039.8</u>	<u>GB</u>	<u>1 January 1991</u>
application no.	country	filing date
<u>9105913.6</u>	<u>GB</u>	<u>7 May 1991</u>
application no.	country	filing date

and all rights of priority in any country of the world deriving from the above-identified International Patent Application.

I/We hereby authorize and request the competent authorities to grant and to issue any and all such Letters Patent in any country throughout the world to BIOCHEM PHARMA INC. as the assignee of the entire right, title and interest therein, as fully and entirely as the same would have been held and enjoyed by me/us had this assignment, sale and transfer not been made.

I/We agree, at any time, upon the request of BIOCHEM PHARMA INC. to execute and to deliver to BIOCHEM PHARMA INC. any additional applications for patents for said inventions and discoveries, or any part or parts thereof, and any applications for patents of confirmation, registration and importation based on any Letters Patent issuing on said inventions, discoveries or applications, and divisions, continuations, revivals, reissues, renewals and extensions thereof.

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REIT 175 19AM 004

I/We further agree, at any time, upon request of BIOCHEM PHARMA INC. to execute and to deliver to such additional documents, if any, as are necessary or desirable to secure patent protection on said inventions, discoveries and applications throughout all countries of the world, and otherwise to do the necessary to give full effect to and to perfect any and all rights of BIOCHEM PHARMA INC. under this Assignment, including the execution, delivery and procurement of any and all further documents evidencing this assignment, transfer and sale as may be necessary or desirable.

It is my/our intention that this Assignment be effective and all rights transferred herein shall be considered to have vested in BIOCHEM PHARMA INC. on 3 January 1992, the filing date of International Patent Application No. PCT/CA92/00001.

ASSIGNORS:

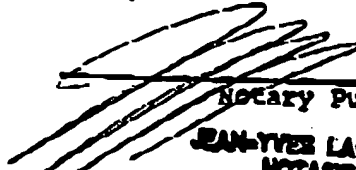
Pierette Bellean (1)
BERNARD BELLEAU (deceased) by
Pierette Belleau Executrix of Estate

NGHE NGUYEN-BA (2)

On this 23rd day of June, 1993,
Pierette Belleau (1) personally appeared
before me, a Notary Public in and for the province
of Quebec, and executed the foregoing
Assignment and duly acknowledged to me that such Assignment
was executed for the uses and purposes therein expressed.

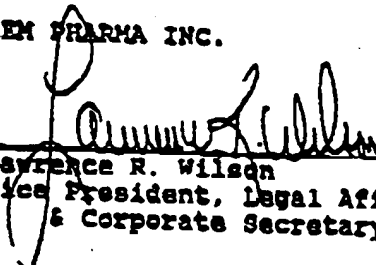
[Signature]
Notary Public
JEAN-YVES LACASSE
NOTAIRE

On this 23rd day of June, 1993
Nghe Nguyen-Ba (2) personally appeared
of Quebec before me, a Notary Public in and for the province
of Quebec, and executed the foregoing
Assignment and duly acknowledged to me that such Assignment
was executed for the uses and purposes therein expressed.

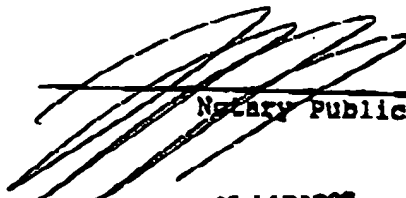

Notary Public
JEAN-YVES LACASSE
NOTARE

ACKNOWLEDGEMENT OF ASSIGNEE:

BIOCHEM PHARMA INC.

By: 
Lawrence R. Wilson
Vice President, Legal Affairs
& Corporate Secretary

On this 23rd day of June, 1993
Lawrence R. Wilson personally appeared before me, a Notary
Public in and for the Province of Quebec, and
duly acknowledged the executed Assignment on behalf of the
Assignee.


Notary Public
JEAN-YVES LACASSE
NOTARE

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OFFICE

page 4 of 4

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application of : Box: REISSUE
 Bernard Belleau et al. : Group Art Unit:
 Serial No.: 09/585.431 : Examiner: Jerome D. Golberg
 Filed: Herewith :
 For: **USE OF 1,3-OXATHIOLANE NUCLEOSIDE ANALOGUES IN THE
 TREATMENT OF HEPATITIS B**

WRITTEN CONSENT OF ASSIGNEE AND OFFER TO SURRENDER

Assistant Commissioner for Patents
 Washington, D.C. 20231

SIR:

BioChem Pharma Inc. is the assignee of record of U.S. Patent No. 5,532,246, issued July 2, 1996, as evidenced by the assignment recorded July 6, 1994, at Reel 7175, Frames 0001-0005.

The undersigned is an authorized officer of the assignee of record, BioChem Pharma Inc. The undersigned is also an authorized official of Tanaud International B.V., a wholly-owned subsidiary of the assignee International B.V. of record, having an interest in this patent by virtue of an unrecorded assignment. Tanaud International B.V. has authorized BioChem Pharma Inc. to hold and maintain this patent in its own name. The undersigned affirms that he has the power to consent to this reissue application on behalf of both the record and unrecorded assignees. BioChem Pharma Inc. and Tanaud International B.V. hereby consent to this reissue application in its entirety and offer to surrender the original patent.

In accordance with 37 C.F.R. §3.73(b), the undersigned authorized officer certifies that the Notice of Recordation of Assignment documents of the above-mentioned application and patent have been reviewed and that, to the best of assignee's knowledge and

belief, record title of the above-mentioned application and patent is in the name of BioChem Pharma Inc.. consistent with the foregoing, and that the undersigned is empowered to sign this document on behalf of assignee and Tanaud International B.V. .

July 6, 2000
Date



Name: Charles Tessier
Title: Vice President Legal Affairs & General
Counsel of BioChem Pharma Inc.

K:\PAT\IAFG\12\Re\246 consent of assignee.wpd